

FIG. 1

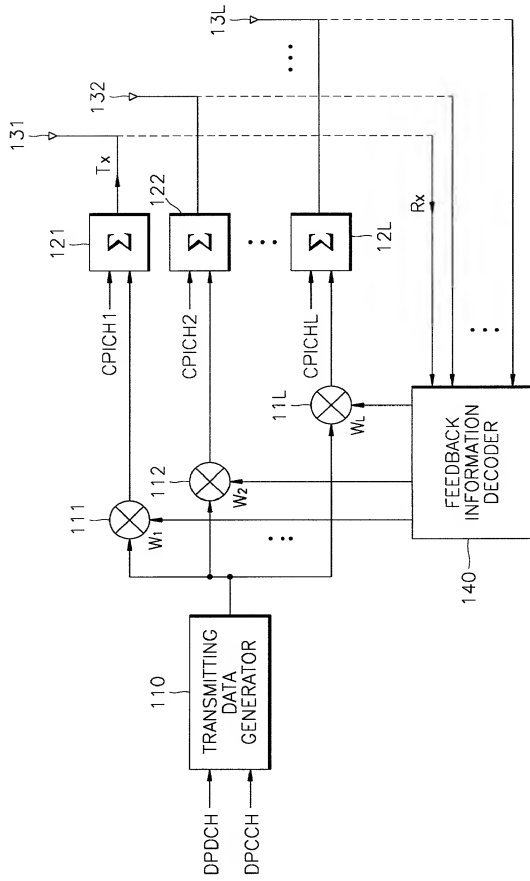


FIG. 2

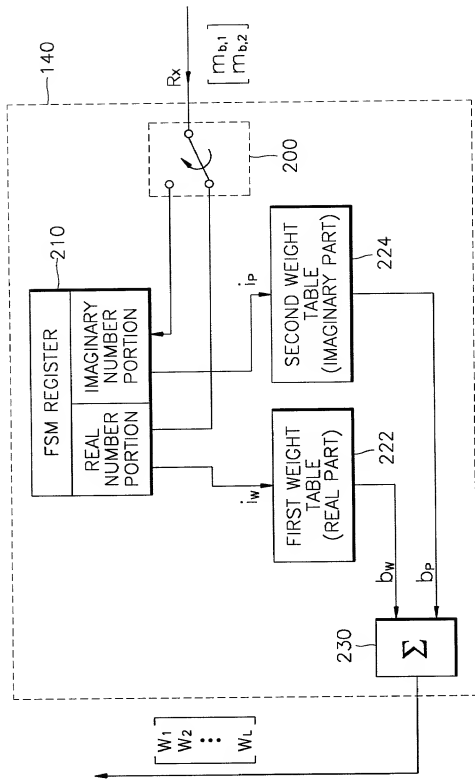


FIG. 3

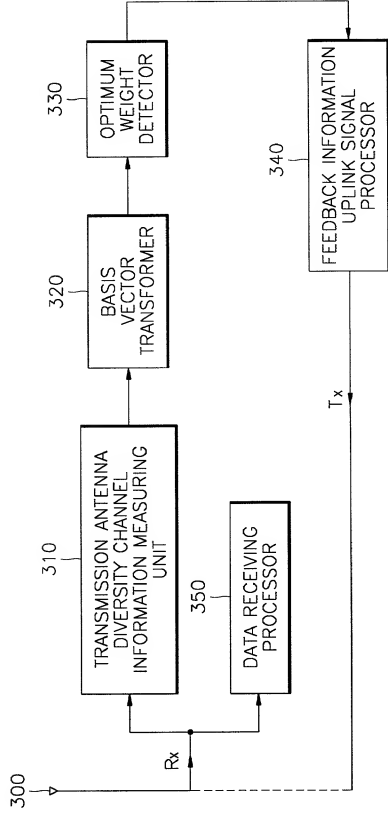


FIG. 4

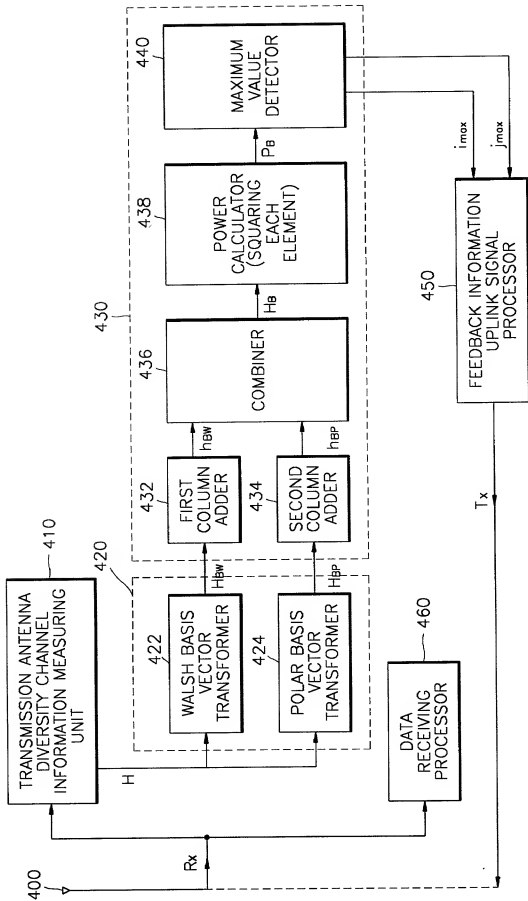


FIG. 5A

INDEX	VECTOR
0	$[1 \ 1 \ 1 \ 1]$
1	$[1 \ -1 \ 1 \ -1]$
2	$[1 \ 1 \ -1 \ -1]$
3	$[1 \ -1 \ -1 \ 1]$

FIG. 5B

INDEX	VECTOR
0	$[-1 \ 1 \ 1 \ 1]$
1	$[1 \ -1 \ 1 \ 1]$
2	$[1 \ 1 \ -1 \ 1]$
3	$[1 \ 1 \ 1 \ -1]$

FIG. 5C

INDEX	VECTOR	INDEX	VECTOR
0	$[1-j \quad 1+j \quad 1+j \quad 1+j]$	8	$[1+j \quad 1+j \quad 1-j \quad 1+j]$
1	$[1-j \quad -1+j \quad 1+j \quad -1+j]$	9	$[1+j \quad -1+j \quad 1-j \quad -1+j]$
2	$[1-j \quad 1+j \quad -1+j \quad -1+j]$	10	$[1+j \quad 1+j \quad -1-j \quad -1+j]$
3	$[1-j \quad -1+j \quad -1+j \quad 1+j]$	11	$[1+j \quad -1+j \quad -1-j \quad 1+j]$
4	$[1+j \quad 1-j \quad 1+j \quad 1+j]$	12	$[1+j \quad 1+j \quad 1+j \quad 1-j]$
5	$[1+j \quad -1-j \quad 1+j \quad -1+j]$	13	$[1+j \quad -1+j \quad 1+j \quad -1-j]$
6	$[1+j \quad 1-j \quad -1+j \quad -1+j]$	14	$[1+j \quad 1+j \quad -1+j \quad -1-j]$
7	$[1-j \quad -1-j \quad -1+j \quad 1+j]$	15	$[1+j \quad -1+j \quad -1+j \quad 1-j]$

FIG. 6

SLOT NUMBER		0	1	2	3	• • •	14	15
FSM	00	$b_w(0)$	$b_p(0)$	$b_w(0)$	$b_p(0)$	• • •	$b_w(0)$	$b_p(0)$
	01	$b_w(1)$	$b_p(1)$	$b_w(1)$	$b_p(1)$	• • •	$b_w(1)$	$b_p(1)$
	10	$b_w(2)$	$b_p(2)$	$b_w(2)$	$b_p(2)$	• • •	$b_w(2)$	$b_p(2)$
	11	$b_w(3)$	$b_p(3)$	$b_w(3)$	$b_p(3)$	• • •	$b_w(3)$	$b_p(3)$

FIG. 7

PARAMETER	VALUE	TYPE
NUMBER OF ANTENNAS	$N_{\text{ant}} = 4$	CONSTANT
DURATION TIME IN A SLOT	$T_{\text{slot}} = 1/1500 \text{ sec}$	
NUMBER OF BASIS SETS FOR BASIS ROTATION	$N_{\text{set}} = 2$	
FEEDBACK COMMAND LENGTH IN SLOTS	$N_w = 2$	
NUMBER OF SELECTION INDEX BITS PER SIGNALING WORD	$N_{\text{set}} = \log_2 N_{\text{ant}} = 2$	VARIABLE
NUMBER OF FEEDBACK INFORMATION BITS PER SLOT	$N_{\text{FBD}} = N_{\text{set}} / 1 = 2$	
FEEDBACK COMMAND UPDATE RATE	$F_{\text{up}} = (N_{\text{FBD}} / N_w) T_{\text{slot}} = 1500 \text{ Hz}$	
FEEDBACK BIT RATE	$N_{\text{FBD}} / T_{\text{slot}} = 3000 \text{ bps}$	